PATENT COOPERATION TREATY

| From the INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY | | | | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--|--|
| To: STEVEN W. STEWART DIGIMARC CORPORATION 19801 SW 72ND AVE. SUITE 100 TUALATIN, OR 97062 | | PCT WRITTEN OPINION | | | | | | |
| | | (PCT Rule 66) | | | | | | |
| | | Date of Mailing (day/month/year) REPLY DUE | 18 MAR 2004 | | | | | |
| Applicant's or agent's file reference | | within 2 months/days from | | | | | | |
| P0565 D | tional filing date | the above date of mailing (day/month/year) Priority date (day/month/year) | | | | | | |
| | | | | | | | | |
| PCT/US01/50483 21 Dec International Patent Classification (IPC) or both n | ember 2001 (21.) | 12.2001) 22 December 2000 (22.12.2000) | | | | | | |
| i | | | | | | | | |
| IPC(7): G06K 19/06 and US CI.: 235/492 Applicant | | | | | | | | |
| DIGIMARC ID SYSTEMS, LLC | | | | | | | | |
| | | | | | | | | |
| 1. This written opinion is the first (first | , etc,) drawn by | this International Pre | liminary Examining Authority. | | | | | |
| 2. This opinion contains indications relat | ing to the followi | ng items: | | | | | | |
| Basis of the opinion | | | | | | | | |
| II Priority | | | | | | | | |
| III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV Lack of unity of invention | | | | | | | | |
| | | | | Reasoned statement under citations and explanations | Reasoned statement under Rule 66.2 (a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | | |
| | | | | VI Certain documents cited | | 45 | | |
| VII Certain defects in the inter | national applicati | on : | | | | | | |
| | | 1.00 | | | | | | |
| | | | | | | | | |
| 3. The applicant is hereby invited to rep | oly to this opinion | les produces base | and the expiration of that time limit request | | | | | |
| this Authority to grant | -an-extension. Se | e rule 66.2(d). | ore the expiration of that time limit, request | | | | | |
| How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9. | | | | | | | | |
| Also MAR 2 2 2004 For an additional opportunity to submit amendments, see Rule 66.4. For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis. For an informal communication with the examiner, see Rule 66.6 | | | | | | | | |
| If no reply is filed, the international | preliminary exam | ination report will b | e established on the basis of this opinion. | | | | | |
| 4. The final date by which the internatio examination report must be established | 4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 22 April 2003 (22.04.2003) | | | | | | | |
| Name and mailing address of the IPEA/US | | | | | | | | |
| Mail Stop PCT, Attn: IPEA/US | | Wall D Fresh | sharin S. Hoppe | | | | | |
| Commissioner for Patents P.O. Box 1450 | | | | | | | | |
| Alexandria, Virginia 22313-1450 Telephone No. (703) 308 0956 Facsimile No. (703)305-3230 | | | | | | | | |
| Form PCT/IPEA/408 (cover sheet)(July 1998) | | | | | | | | |

WRITTEN OPINION

International application No.

PCT/US01/50483

| I. | Basis | s of the opinion | | |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| 1. | With | regard to the elements of the international application:* | | |
| | | the international application as originally filed the description: pages 1-11, as originally filed pages NONE, filed with the demand pages NONE, filed with the letter of | | |
| | \boxtimes | the claims: pages 12 and 13, as originally filed pages NONE, as amended (together with any statement) under Article 19 pages NONE, filed with the demand pages NONE, filed with the letter of | | |
| | | the drawings: pages 1-2, as originally filed pages NONE, filed with the demand pages NONE, filed with the letter of the sequence listing part of the description: | | |
| | | pages NONE, as originally filed, filed with the demand, filed with the letter of pages NONE, filed with the letter of | | |
| 2. | With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language which is | | | |
| | | the language of a translation furnished for the purposes of international search (under Rule23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3). | | |
| 3. | 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing: | | | |
| | contained in the international application in printed form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. | | | |
| | furnished subsequently to this Authority in computer readable form. The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in international application as filed has been furnished. | | | |
| | | The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished. | | |
| 4. | \boxtimes | The amendments have resulted in the cancellation of: | | |
| | | the description, pages none the claims, Nos. none the drawings, sheets/fig none | | |
| 5. | | This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)). | | |
| * th | Repla is opin | cement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in tion as "originally filed." | | |
| 4 | | | | |

WRITTEN OPINION

International application No. PCT/US01/50483

| v. | Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability |
|----|--------------------------------------------------------------------------------------------------------------|
| | citations and explanations supporting such statement |

1. STATEMENT

| Novelty (N) | Claims NONE Claims 1-13 | YESNO |
|-------------------------------|-------------------------|-------|
| Inventive Step (IS) | Claims NONE Claims 1-13 | |
| Industrial Applicability (IA) | Claims 1-13 Claims NONE | |

2. CITATIONS AND EXPLANATIONS

Claims 1-13 lack an inventive step under PCT Article 33(3) as being obvious over Leighton US 6,036,099 in view of JP 11259620A. Leighton discloses a circuit card 10 with a core 33, bottom and toplaminate layers 38, a circuit 22 and an antenna coil 20. Leighton does not disclose the laminate layer is a polyolefin. JP 11259620A discloses a card with a protective layer, which may be made of polyolefin. Leighton and JP 11259620A do not disclose that the core is also made of a polyolefin. However, as seen in JP 11259620A the use of polyolefin in circuit cards is old and well known. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a polyolefin laminate and core in the card of Leighton to increase the durability due to the inherent nature of the polyolefin substance and the adhesion properties of the multiple polyolefin surfaces. Leighton and JP 11259620A do not disclose the image surface. However, images on circuit cards, such as ID cards, printed in many ways including thermal printing and layering are old and well known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide an image on one of the surfaces of Leighton, as this would allow for positive identification of the user and bearer of the card.

Claims 1-13 meet the criteria set out in PCT Article 33(4), because the invention is useful to the industry. NEW CITATIONS -----

JP 11259620 A (Unknown) 24 September 1999 (24/09/1999), see translated passage.

WRITTEN OPINION

International application No.

PCT/US01/50483

VI. Certain document cited

1. Certain published documents (Rule 70.10)

Application No Patent No. US 6,478,228 B1 US 2003/0038174 A1 US 2002/0070280 A1 US 2001/0002035 A1

Publication Date (day/month/year)

12 November 2002 (12.11.2002) 27 February 2003 (27.02.2003) 13 June 2002 (13.06.2002) 31 May 2001 (31.05.2001)

Filing Date (day/month/year) 22 December 1997 (22.12.1997)

22 December 2000 (22.12.2000) 22 December 1997 (22.12.1997) 29 November 2000 (29.11.2000)

Priority Date (valid claim) (day/month/year) 27 December 1996 (27.12.1996)

None 27 December 1996 (27.12.1996)

29 November 1999 (29.11.1999)

2. Non-written disclosures (Rule 70.9)

Kind of non-written disclosure

Date of non-written disclosure (day/month/year)

Date of written disclosure referring to non-written disclosure (day/month/year)

| WR | m | CEN | OP | IM | ΩN |
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International application No. PCT/US01/50483

| Supplemental Box (To be used when the space in any of the preceding boxes is not sufficient) | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| TIME LIMIT: The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report. | | | | |
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